

Housestaff Use of Medical References in Ambulatory Care

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Abstract

We surveyed medical house officers at the Beth Israel Deaconess Medical Center during their ambulatory rotations about their utilization of reference materials, assessing such factors as frequency, the mode of reference, and specific choice of resources. The collected data were significantly illustrative of the shift from paper-based resources to digital references. These findings confirm that availability should be of utmost priority when designing references for physicians in training.

Introduction

Advances in information technology have irrevocably changed the use of medical references by physicians. The literature regarding patterns of use in the ambulatory setting has not been sufficiently updated to reflect these trends.

Methods

From August 2001 to June 2002, we distributed paper surveys to 74 medical house officers at the Beth Israel Deaconess Medical Center in the midst of their 3-week ambulatory rotations. Questions targeted such factors as frequency of use, the mode of reference (handheld, computer-based, or printed text), and specific choice of resources. We also asked the housestaff to rate a list of barriers to the use of information on a Likert-scale.

Results

We achieved a 64% response rate. In terms of demographic information, 86% of the survey respondents were junior or senior residents. 67% of house officers have handheld computers for medical purposes. Computers have been used for a median of 5 years as a medical resource.

54% of house officers use paper pocket guides 3 or more times a day to answer clinical questions, compared to the use of Internet (25%) or textbooks (7%). 70% felt that clinical questions could be answered in <30 seconds using handheld computers, compared to 63% using pocket guides or 16% using textbooks.

As a first-choice resource for drug-related questions, MicromedexTM was used most frequently, followed by handheld drug databases like Epocrates

RxTM and the Tarascon PharmacopoeiaTM pocket guide. In contrast, house officers turn predominantly to peers and providers to answer system-based and operational questions.

In terms of the quality of information, reliability and lack of depth were not felt to be important barriers. Instead, the house officers felt that time constraints are the strongest deterrents to the use of information. 84% agreed or strongly agreed that obstacles to information adversely affect provider satisfaction.

Conclusion

This study parallels a landmark study in 1985, which described the information needs of primary care physicians¹. This and other studies examining clinicians' information needs² showed a disparity between physicians' expectations of electronic resources and actual use. We found that print materials are no longer the most common resource medium for information gathering.

The survey demonstrated that time-related factors continue to be the strongest determinants in choosing resources, whether it relates to the ability to find an answer quickly or ease of access. Portability and availability should be of utmost priority when designing references for physicians in training.

Although studies based on trainees do not necessarily generalize to practicing physicians³, residents are likely to carry their information-seeking habits into daily practice. We anticipate a continued stronger reliance on computer-based and palmtop-based systems due to their accessibility.

¹ Covell D, Uman G, Manning P. Information needs in office practice: are they being met? *Ann Intern Med.* 1985 Oct;103(4):596-9.

² Woolf S, Benson D. The medical information needs of internists and pediatricians at an academic medical center. *Bull Med Libr Assoc.* 1989 Oct;77(4):372-80.

³ Tang P, Jaworski M, Fellencer C, LaRosa M, Lassa J, Lipsey P, Marquardt W. Methods for assessing information needs of clinicians in ambulatory care. *Proc Annu Symp Comput Appl Med Care.* 1995;630-4.